

REMARKS

Claims 1, 4-7, 9, 11-15, and 19-27 remain pending in this application. No new matter has been added. Claims 1, 7, 9, 13, and 15 are presently amended herein. No new matter has been added. Applicants therefore respectfully request that the amendments be entered at this time to reduce the issues for appeal by placing the claims in condition for allowance.

Claims 9, 11-12, and 23-25 were rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for SEQ ID NO:1 and microbial cells transformed therewith, does not reasonably provide enablement for transformed plant cells and plants comprising said polynucleotides or dietary, cosmetic or pharmaceutical compositions.

The test for enablement is whether one skilled in the art could practice "the invention from the disclosure in the patent coupled with information known in the art without undue experimentation." *United States v. Electronics, Inc.*, 8 USPQ2d 1217, 1223 (Fed. Cir. 1988). Reasonable experimentation is allowed and expected. A patent need not teach and preferably omits, what is well known in the art. *Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 231 U.S.P.Q. 81, 94 (Fed. Cir. 1986).

Applicants have amended the claims to delete reference to pharmaceutical compositions. Furthermore, the Examiner has acknowledged that the specification is enabling for microbial cells transformed with the isolated nucleic acid molecule of the claims. At the time of filing many examples of successfully transformed plants were known in the art. It would simply be a routine exercise for one skilled in the art to further transform a plant cell instead of microbial cell with the presently claimed sequence.

As evidence of this, numerous methods for plant transformation were well known at the time of filing of the present application, including biological and physical, plant transformation protocols. See, for example, Miki *et al.*, "Procedures for Introducing Foreign DNA into Plants" in Methods in Plant Molecular Biology and Biotechnology, Glick, B. R. and Thompson, J. E. Eds. (CRC Press, Inc., Boca Raton, 1993) pages 67-88. In addition, expression vectors, *in vitro* culture methods, and plant regeneration methods were also well known and available at the time of filing. See, for example, Gruber *et al.*, "Vectors for Plant Transformation" in Methods in Plant Molecular Biology and Biotechnology, Glick, B. R. and Thompson, J. E. Eds. (CRC Press, Inc., Boca Raton, 1993) pages 89-119.

Examples of plant cell transformation methods that were well known at the time of filing included:

- 1). *Agrobacterium*-mediated transformation. See, for example, Horsch *et al.*, Science 227: 1229 (1985); Kado, C. I., Crit. Rev. Plant. Sci. 10: 1 (1991); Gruber *et al.*, supra, Miki *et al.*, supra, and Moloney *et al.*, Plant Cell Reports 8: 238 (1989); and U.S. Pat. No. 5,591,616, issued Jan. 7, 1997.
- 2). microprojectile-mediated transformation. See, for example, Sanford *et al.*, Part. Sci. Technol. 5: 27 (1987) and Sanford, J. C., Trends Biotech. 6: 299 (1988).
- 3). sonication of target cells. See, for example, Zhang *et al.*, BiolTechnology 9: 996 (1991);
- 4). liposome or spheroplast fusion; Deshayes *et al.*, EMBO J., 4: 2731 (1985); and
- 5). electroporation as explained in, for example, D'Halluin *et al.*, Plant Cell 4: 1495-1505 (1992) and Spencer *et al.*, Plant Mol. Biol. 24: 51-61 (1994).

In view of the state of the art at the time of filing, one skilled in the art would be expected to understand how to successfully transform a plant cell using the presently claimed and disclosed sequence, especially in light of the fact that the Examiner has agreed that transformation of microbial cells with the claimed sequence are enabled. While, some experimentation might be necessary to carrier out different aspects of the invention, no undue experimentation would be required to successfully practice this embodiment of the invention. Applicants therefore, respectfully request that this rejection be withdrawn for these reasons.

Claims 1, 7, 13-14, 19-20, and 26-27 were objected to as reading on non-elected sequences.

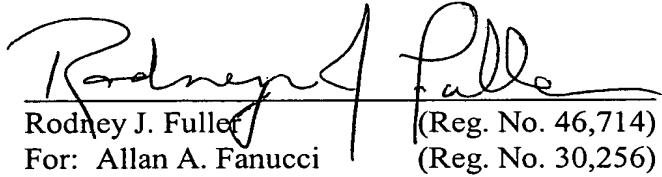
The claims are now amended to delete non-elected species. Applicants, however, reserve the right to file one or more divisional, continuation, or continuation-in-part applications for the non-elected subject matter.

Accordingly, the entire application should be in condition for allowance, early notice of which would be appreciated. Should the Examiner not agree with the Applicants' position, then a personal or telephonic interview is respectfully requested to discuss any remaining issues and expedite the eventual allowance of the application.

Date

1/26/04

Respectfully submitted,


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